

FLIGHT REPORT

NORTH DAKOTA ATMOSPHERIC RESOURCE BOARD SFN 50864(12/2014)

ENG	INES OFF	HOURS		PAGE #	OF	
	21:48:14	3.24		1	3	
ENG	INES ON	DRY ICE RATE	1 GEN	2 GEN		
	18:34:00	0	0.04	2.00		
TOT	AL TIME	DRY ICE (lbs)	EJCTBL (grams)	BIP (grams)		
	03:14:14	0.00	0	67	75	

DATE DISTRICT SEED#				PILOT COPILOT								PURPOSE	R - Rain H - Hail O - Other	
June 29, 2017 2		2	6	Justin Bauer			Kyle Haines					Н	M - Maintenance C - Reconnaissance	
Time	EVENT	LATITUDE	LONGITUDE	CLD BASE	ALTITUDE	UPDRAFT	TEMP	PRECIP	DRY ICE	FL/ EJC	RES BIP	WINTIP	REMARKS	
(HH:MM)	#	(deg)	(deg)	(kft)	(KFT)	(FT/MIN)	(°C)	CODE**	(sec)			GEN (#)		
18:34:33		47.80276	-103.2591		2.0					0	0	0	Engines on in	Watford City.
18:44:38		47.83276	-103.2457		3.2					0	0	0		
18:54:39		48.11810	-102.9570		7.0					0	0	0		
19:01:54	1	48.29006	-102.6503	7	7.5	700	3	3		0	0	2	Two burners	on.
19:11:55		48.27611	-102.6018		7.1					0	0	2		
19:16:03		48.26254	-102.6213	7.3	7.0	600	7	3		0	0	2		
19:26:03		48.26247	-102.4953		7.0					0	0	2		
19:28:08		48.25892	-102.5472	8	7.0	600	7	3		0	0	2		
19:30:45	2	48.24702	-102.5854	7.5	6.7	700	7	3		0	1	2	BIP lit.	
19:40:46		48.21675	-102.4737		7.1					0	0	2		
19:40:49		48.21743	-102.4760	7.5	7.1	700	7	3		0	0	2		
19:50:55		48.18698	-102.4490		7.0					0	0	2		
19:57:45		48.16019	-102.4815	7.4	7.1	700	8	3		0	0	2		

**PRECIPITATION INTENSITY

- 0 No Precipitation
- 1 virga only, precip not to ground
- 2 rain shaft to surface, light
- 3 rain shaft well established, but can be seen through
- 4 heavy rain shaft, cannot be seen through

MISSION SUMMARY

Launched to the northeast at 1834z to perform reconnaissance on a cell that was popping up near Stanley. When we arrived we found moderate inflow and engaged both burners. We continued our pattern around as the cell continued to grow and merge with adjacent cells. We continued seeding until a tornado warning was issued and seeding was suspended at 2100z. After unable to confirm any rotation or funnel clouds seeding was resumed at 2108z. The intent was to light both burners but the right was out of mixture. We continued to operate the left burner until it was starved at 2113z. Several more passes around the northeast side of the storm were made while burning flares until we were told to rib to Minot and to refuel and rearm. After landing at Minot at 2148z one of the 10 flares was found to be



FLIGHT REPORT

NORTH DAKOTA ATMOSPHERIC RESOURCE BOARD SFN 50864(12/2014)

Γ	ENGINES OFF	HOURS		PAGE#	OF		
	21:48:14	3.24		2	3		
Γ	ENGINES ON	DRY ICE RATE	1 GEN	2 GEN			
	18:34:00	0	0.04	2.00			
Γ	TOTAL TIME	DRY ICE (lbs)	EJCTBL (grams)	BIP (grams)			
L	03:14:14	0.00	0	675			

DATE DISTRICT SEED #				PILOT	COPILOT				PURPOSE	R - Rain H - Hail O - Other				
June 29, 2017		2	6	Justin Bauer			Kyle Haines					Н	M - Maintenance C - Reconnaissance	
Time	EVENT	LATITUDE	LONGITUDE	CLD BASE	ALTITUDE	UPDRAFT	ТЕМР	PRECIP	DRY ICE	FL <i>A</i> EJC	RES	WINTIP		REMARKS
(HH:MM)	#	(deg)	(deg)	(kft)	(KFT)	(FT/MIN)	(°C)	CODE**	(sec)	L30	DIF	GEN (#)		
20:03:27	3	48.09949	-102.4639	7.7	7.5	900	6	4		0	1	2	BIP lit.	
20:08:37	4	48.08729	-102.4963	7.5	7.2	900	7	4		0	1	2	BIP lit.	
20:18:42		47.93829	-102.6263		7.5					0	0	2		
20:20:12	5	47.93373	-102.6060	7.5	7.6	800	7	4		0	1	2	BIP lit.	
20:30:13		47.99176	-102.4912		7.3					0	0	2		
20:32:24		47.94319	-102.5164	7.5	7.4	600	6	4		0	0	2		
20:42:25		47.94608	-102.4216		7.2					0	0	2		
20:51:33		47.90245	-102.3838	7.8	7.2	800	8	4		0	0	2		
20:53:16	6	47.89661	-102.3769	7.9	7.3	900	7	4		0	1	2	BIP lit.	
20:58:57	7	47.86439	-102.3071	7.8	6.8	800	8	4		0	0	0	Two burners of	off.
21:08:28	8	47.94826	-102.0983	7.5	6.4	500	7	4		0	0	2	Two burners of	on.
21:10:11	9	47.95195	-102.0835	7.5	6.9	500	7	4		0	1	2	BIP lit.	
21:11:23	10	47.91525	-102.0822	7.5	6.8	700	7	4		0	0	1	Right burner of	off.

**PRECIPITATION INTENSITY

- 0 No Precipitation
- 1 virga only, precip not to ground
- 2 rain shaft to surface, light
- 3 rain shaft well established, but can be seen through
- 4 heavy rain shaft, cannot be seen through

MISSION SUMMARY

Launched to the northeast at 1834z to perform reconnaissance on a cell that was popping up near Stanley. When we arrived we found moderate inflow and engaged both burners. We continued our pattern around as the cell continued to grow and merge with adjacent cells. We continued seeding until a tornado warning was issued and seeding was suspended at 2100z. After unable to confirm any rotation or funnel clouds seeding was resumed at 2108z. The intent was to light both burners but the right was out of mixture. We continued to operate the left burner until it was starved at 2113z. Several more passes around the northeast side of the storm were made while burning flares until we were told to rib to Minot and to refuel and rearm. After landing at Minot at 2148z one of the 10 flares was found to be



FLIGHT REPORT

NORTH DAKOTA ATMOSPHERIC RESOURCE BOARD SFN 50864(12/2014)

_						
	ENGINES OFF	HOURS		PAGE #	OF	
	21:48:14	3.24		3	3	
Γ	ENGINES ON	DRY ICE RATE	1 GEN	2 GEN		
	18:34:00	0	0.04	2.0	00	
Γ	TOTAL TIME	DRY ICE (lbs)	EJCTBL (grams)	BIP (grams)		
	03:14:14	0.00	0	67	75	

DATE		DISTRICT	SEED#	PILOT				COPILOT					PURPOSE	R - Rain H - Hail O - Other
June 29,	June 29, 2017		6	Justin Bauer			Kyle Haines					Н	M - Maintenance C - Reconnaissance	
Time (HH:MM)	EVENT #	LATITUDE (deg)	LONGITUDE (deg)	CLD BASE (kft)	ALTITUDE (KFT)	UPDRAFT (FT/MIN)	TEMP (°C)	PRECIP CODE**	DRY ICE (sec)	FL <i>A</i> EJC	RES BIP	WINTIP GEN (#)		REMARKS
21:13:48	11	47.91045	-102.0717	7.5	6.7	700	7	4		0	0	0	Left burner of	f.
21:15:44	12	47.90345	-102.0579	7.5	6.7	700	7	4		0	1	0	BIP lit.	
21:20:33	13	47.87569	-102.0457	7.5	6.6	700	7	4		0	1	0	BIP lit.	
21:23:54	14	47.90872	-102.0339	7.5	6.5	700	7	4		0	1	0	BIP lit.	
21:34:00		48.04177	-101.7320		6.3					0	0	0		
21:44:02		48.27086	-101.2960		1.9					0	0	0		
21:48:16		48.26401	-101.2944		1.7					0	0	0	Engines off in	Minot.

**PRECIPITATION INTENSITY

- 0 No Precipitation
- 1 virga only, precip not to ground
- 2 rain shaft to surface, light
- 3 rain shaft well established, but can be seen through
- 4 heavy rain shaft, cannot be seen through

MISSION SUMMARY

Launched to the northeast at 1834z to perform reconnaissance on a cell that was popping up near Stanley. When we arrived we found moderate inflow and engaged both burners. We continued our pattern around as the cell continued to grow and merge with adjacent cells. We continued seeding until a tornado warning was issued and seeding was suspended at 2100z. After unable to confirm any rotation or funnel clouds seeding was resumed at 2108z. The intent was to light both burners but the right was out of mixture. We continued to operate the left burner until it was starved at 2113z. Several more passes around the northeast side of the storm were made while burning flares until we were told to rib to Minot and to refuel and rearm. After landing at Minot at 2148z one of the 10 flares was found to be